

Figure S1 Comparison of homology sequences between GS transcript of *Crassostrea ariakensis* and other species

	ns	r	p	r	tts	a	dg	t	at	g	g	dr	y	d	i	ngngsf	g	qa	l	e	v	a	k	kkv	l	q	g	krf	knrel	96
Crassostrea ariakensis																														
Crassostrea giga	NS	TPRRTTS	AEGVKSG...	SNAQFGGMRTI.	NKDGSKITV...	LATNGS	SDRTQEVSYD...	AKV	GNGSF	GVVYCARL	VESEN	ELVAI	KKVLQDKRFKNREL																96	
Crassostrea virginica	NS	TPRRTTS	AEGVKSG...	SNAQFGGMRTI.	NKDGSKITV...	LATNGS	SDRTQEVSYD...	AKV	GNGSF	GVVYCARL	VESEN	ELVAI	KKVLQDKRFKNREL																96	
Pinctada fucata	NS	TPRRTTS	AEGVKSG...	SNAQFGGMRTI.	NKDGSKITV...	LATNGS	SDRTQEVSYD...	AKV	GNGSF	GVVYCARL	VESEN	ELVAI	KKVLQDKRFKNREL																96	
Mytilus galloprovincialis	NS	TPRRTTS	FAECKGKQG...	STAQFGGMRTI.	NRDGRVTTV...	TLDGGS	SDRTQEVSYD...	AKV	GNGSF	GVVYCARL	VESEN	ELVAI	KKVLQDKRFKNREL																96	
Mytilus coruscus	NS	TPRRTTS	FAECKNKG...	STAPYFGGMRTI.	SKDGSKITV...	LATNGS	SDRTQEVSYD...	AKV	GNGSF	GVVYCARL	VESEN	ELVAI	KKVLQDKRFKNREL																96	
Octopus sinensis	NS	TPRRTTS	FAECKGKAG...	STAPYFGGMRTI.	NKDGSKITV...	LATNGS	SDRTQEVSYD...	AKV	GNGSF	GVVYCARL	VESEN	ELVAI	KKVLQDKRFKNREL																96	
Biomphalaria glabrata	NS	TPRRTTS	FAEAKQG...	QSSSFQGMRTI.	SKDGSKITV...	LATNGS	SDRTQEVSYD...	AKV	GNGSF	GVVYCARL	VESEN	ELVAI	KKVLQDKRFKNREL																96	
Platynereis dumerilii	NS	TPRRTTS	FAEAKQG...	QSSSFQGMRTI.	SKDGSKITV...	LATNGS	SDRTQEVSYD...	AKV	GNGSF	GVVYCARL	VESEN	ELVAI	KKVLQDKRFKNREL																96	
Hyakella azteca	NS	TPRRTTS	FAEAKQG...	QSSSFQGMRTI.	SKDGSKITV...	LATNGS	SDRTQEVSYD...	AKV	GNGSF	GVVYCARL	VESEN	ELVAI	KKVLQDKRFKNREL																96	
Saccoglossus kowalevskii	NS	TPRRTTS	FAEAKQG...	QSSSFQGMRTI.	SKDGSKITV...	LATNGS	SDRTQEVSYD...	AKV	GNGSF	GVVYCARL	VESEN	ELVAI	KKVLQDKRFKNREL																96	
Scleropages formosus	NS	TPRRTTS	FAEAKQG...	QSSSFQGMRTI.	SKDGSKITV...	LATNGS	SDRTQEVSYD...	AKV	GNGSF	GVVYCARL	VESEN	ELVAI	KKVLQDKRFKNREL																96	
Sus scrofa	NS	TPRRTTS	FAEAKQG...	QSSSFQGMRTI.	SKDGSKITV...	LATNGS	SDRTQEVSYD...	AKV	GNGSF	GVVYCARL	VESEN	ELVAI	KKVLQDKRFKNREL																96	
Homo sapiens	NS	TPRRTTS	FAEAKQG...	QSSSFQGMRTI.	SKDGSKITV...	LATNGS	SDRTQEVSYD...	AKV	GNGSF	GVVYCARL	VESEN	ELVAI	KKVLQDKRFKNREL																96	
Mus pahari	NS	TPRRTTS	FAEAKQG...	QSSSFQGMRTI.	SKDGSKITV...	LATNGS	SDRTQEVSYD...	AKV	GNGSF	GVVYCARL	VESEN	ELVAI	KKVLQDKRFKNREL																96	
Consensus	ns	r	p	r	tts	a	dg	t	at	g	g	dr	y	d	i	ngngsf	g	qa	l	e	v	a	k	kkv	l	q	g	krf	knrel	96
Crassostrea ariakensis	QI	MRKEFHVN	VKREKFFYSAGE...	KKDEVFLNLVLE...	YVPEVITYRVARHYS	KSKQPIVLYI	YL	KL	YMLYQLFRSLAYI	ES	CCV	CHRDIP	KPQNLLLDPE	IGV	193															
Crassostrea giga	QI	MRKEFHVN	VKREKFFYSAGE...	KKDEVFLNLVLE...	YVPEVITYRVARHYS	KSKQPIVLYI	YL	KL	YMLYQLFRSLAYI	ES	CCV	CHRDIP	KPQNLLLDPE	IGV	193															
Crassostrea virginica	QI	MRKEFHVN	VKREKFFYSAGE...	KKDEVFLNLVLE...	YVPEVITYRVARHYS	KSKQPIVLYI	YL	KL	YMLYQLFRSLAYI	ES	CCV	CHRDIP	KPQNLLLDPE	IGV	193															
Pinctada fucata	QI	MRKEFHVN	VKREKFFYSAGE...	KKDEVFLNLVLE...	YVPEVITYRVARHYS	KSKQPIVLYI	YL	KL	YMLYQLFRSLAYI	ES	CCV	CHRDIP	KPQNLLLDPE	IGV	193															
Mytilus galloprovincialis	QI	MRKEFHVN	VKREKFFYSAGE...	KKDEVFLNLVLE...	YVPEVITYRVARHYS	KSKQPIVLYI	YL	KL	YMLYQLFRSLAYI	ES	CCV	CHRDIP	KPQNLLLDPE	IGV	193															
Mytilus coruscus	QI	MRKEFHVN	VKREKFFYSAGE...	KKDEVFLNLVLE...	YVPEVITYRVARHYS	KSKQPIVLYI	YL	KL	YMLYQLFRSLAYI	ES	CCV	CHRDIP	KPQNLLLDPE	IGV	193															
Octopus sinensis	QI	MRKEFHVN	VKREKFFYSAGE...	KKDEVFLNLVLE...	YVPEVITYRVARHYS	KSKQPIVLYI	YL	KL	YMLYQLFRSLAYI	ES	CCV	CHRDIP	KPQNLLLDPE	IGV	193															
Biomphalaria glabrata	QI	MRKEFHVN	VKREKFFYSAGE...	KKDEVFLNLVLE...	YVPEVITYRVARHYS	KSKQPIVLYI	YL	KL	YMLYQLFRSLAYI	ES	CCV	CHRDIP	KPQNLLLDPE	IGV	193															
Platynereis dumerilii	QI	MRKEFHVN	VKREKFFYSAGE...	KKDEVFLNLVLE...	YVPEVITYRVARHYS	KSKQPIVLYI	YL	KL	YMLYQLFRSLAYI	ES	CCV	CHRDIP	KPQNLLLDPE	IGV	193															
Hyakella azteca	QI	MRKEFHVN	VKREKFFYSAGE...	KKDEVFLNLVLE...	YVPEVITYRVARHYS	KSKQPIVLYI	YL	KL	YMLYQLFRSLAYI	ES	CCV	CHRDIP	KPQNLLLDPE	IGV	193															
Saccoglossus kowalevskii	QI	MRKEFHVN	VKREKFFYSAGE...	KKDEVFLNLVLE...	YVPEVITYRVARHYS	KSKQPIVLYI	YL	KL	YMLYQLFRSLAYI	ES	CCV	CHRDIP	KPQNLLLDPE	IGV	193															
Scleropages formosus	QI	MRKEFHVN	VKREKFFYSAGE...	KKDEVFLNLVLE...	YVPEVITYRVARHYS	KSKQPIVLYI	YL	KL	YMLYQLFRSLAYI	ES	CCV	CHRDIP	KPQNLLLDPE	IGV	193															
Sus scrofa	QI	MRKEFHVN	VKREKFFYSAGE...	KKDEVFLNLVLE...	YVPEVITYRVARHYS	KSKQPIVLYI	YL	KL	YMLYQLFRSLAYI	ES	CCV	CHRDIP	KPQNLLLDPE	IGV	193															
Homo sapiens	QI	MRKEFHVN	VKREKFFYSAGE...	KKDEVFLNLVLE...	YVPEVITYRVARHYS	KSKQPIVLYI	YL	KL	YMLYQLFRSLAYI	ES	CCV	CHRDIP	KPQNLLLDPE	IGV	193															
Mus pahari	QI	MRKEFHVN	VKREKFFYSAGE...	KKDEVFLNLVLE...	YVPEVITYRVARHYS	KSKQPIVLYI	YL	KL	YMLYQLFRSLAYI	ES	CCV	CHRDIP	KPQNLLLDPE	IGV	193															
Consensus	QI	MRKEFHVN	VKREKFFYSAGE...	KKDEVFLNLVLE...	YVPEVITYRVARHYS	KSKQPIVLYI	YL	KL	YMLYQLFRSLAYI	ES	CCV	CHRDIP	KPQNLLLDPE	IGV	193															
Crassostrea ariakensis	LKL	DFGSAKMLV	VIGEPNVSYI	CARYYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	293										
Crassostrea giga	LKL	DFGSAKMLV	VIGEPNVSYI	CARYYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	293										
Crassostrea virginica	LKL	DFGSAKMLV	VIGEPNVSYI	CARYYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	293										
Pinctada fucata	LKL	DFGSAKMLV	VIGEPNVSYI	CARYYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	293										
Mytilus galloprovincialis	LKL	DFGSAKMLV	VIGEPNVSYI	CARYYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	293										
Mytilus coruscus	LKL	DFGSAKMLV	VIGEPNVSYI	CARYYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	293										
Octopus sinensis	LKL	DFGSAKMLV	VIGEPNVSYI	CARYYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	293										
Biomphalaria glabrata	LKL	DFGSAKMLV	VIGEPNVSYI	CARYYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	293										
Platynereis dumerilii	LKL	DFGSAKMLV	VIGEPNVSYI	CARYYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	293										
Hyakella azteca	LKL	DFGSAKMLV	VIGEPNVSYI	CARYYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	293										
Saccoglossus kowalevskii	LKL	DFGSAKMLV	VIGEPNVSYI	CARYYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	293										
Scleropages formosus	LKL	DFGSAKMLV	VIGEPNVSYI	CARYYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	293										
Sus scrofa	LKL	DGAQASDGT	LLVSRSLLETPS	QARVYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	293										
Homo sapiens	LKL	DGAQASDGT	LLVSRSLLETPS	QARVYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	293										
Mus pahari	LKL	DGAQASDGT	LLVSRSLLETPS	QARVYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	293										
Consensus	LKL	DGAQASDGT	LLVSRSLLETPS	QARVYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	293										
Crassostrea ariakensis	ARNASD	PG...	AVTGDTNPG...	OLVSRSLLETPS	QARVYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	413									
Crassostrea giga	ARNASD	PG...	AVTGDTNPG...	OLVSRSLLETPS	QARVYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	413									
Crassostrea virginica	ARNASD	PG...	AVTGDTNPG...	OLVSRSLLETPS	QARVYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	413									
Pinctada fucata	ARNA	PG...	AVTGDTNPG...	OLVSRSLLETPS	QARVYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	413									
Mytilus galloprovincialis	ARNA	PG...	AVTGDTNPG...	OLVSRSLLETPS	QARVYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	413									
Mytilus coruscus	ARNA	PG...	AVTGDTNPG...	OLVSRSLLETPS	QARVYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	413									
Octopus sinensis	ARNA	PG...	AVTGDTNPG...	OLVSRSLLETPS	QARVYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	413									
Biomphalaria glabrata	ARNA	PG...	AVTGDTNPG...	OLVSRSLLETPS	QARVYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	413									
Platynereis dumerilii	ARNA	PG...	AVTGDTNPG...	OLVSRSLLETPS	QARVYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	413									
Hyakella azteca	ARNA	PG...	AVTGDTNPG...	OLVSRSLLETPS	QARVYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	413									
Saccoglossus kowalevskii	ARNA	PG...	AVTGDTNPG...	OLVSRSLLETPS	QARVYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	413									
Scleropages formosus	ARNA	PG...	AVTGDTNPG...	OLVSRSLLETPS	QARVYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN	NN	TE	EKF	PQ	413									
Sus scrofa	ARNA	PG...	AVTGDTNPG...	OLVSRSLLETPS	QARVYRAPELI	FQSDNTCTQF	DWWSAGCVLAELL	LGQPPI	FG	PGDGS	GVQDQLVEI	KVLG	LT	TRE	QI	REN</td														